

REMARKS

By this amendment, independent claims 1 and 2 have been amended to more distinctly claim the subject matter of the invention.

The Examiner has rejected claims 2-9 under 35 U.S.C. § 112 (2nd ¶), arguing that independent claim 2 is vague and indefinite for the reasons advanced in the second paragraph under item 2 on page 2 of the Official Action. Applicant does not understand what precisely the Examiner finds objectionable. Claim 2 clearly recites that the “at least two voltage inputs [of the actuator unit] are generating coupled to said at least two voltage outputs”, the antecedent of which are the two voltage outputs of the drive unit. As to “how” “the drive direction of the motor is determined ...”, is disclosed in the specification. Accordingly, Applicant respectfully traversed the Examiner’s rejection under 35 U.S.C. § 112 (2nd ¶).

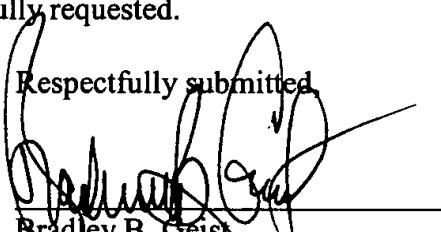
On the merits, the Examiner has rejected “Claims 1-4, 5/2, 5/3, 5/4 and 6” under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 4,910,445 (Borrmann). In support of this rejection, the Examiner advances arguments under item 4, at pages 3 and 4 of the Official Action. Applicant respectfully traverses the § 102(b) rejection for the following reasons.

In the claimed invention, for example in the case of a motor that is supposed to rotate in a certain direction, the control signal, e.g. to the left, is issued to the control unit of the electric motor. In addition, the voltage supply ensures that the motor can rotate to the left only. For this purpose, the defined polarity is impressed on the electric motor. This prevents the motor from being able to rotate in the other direction, if by mistake the control command should arrive at the control unit of the electric motor in

error. Therefore a twofold security is achieved, so that the actuating means will really rotate in the desired direction. Thus the invention concerns twofold approach, in which both conditions must always coincide, so that the actuating means will be actuated in the desired direction.

Borrmann discloses an approach for the control of an electric motor whereby depending on the desired direction of rotation, the particular voltage with corresponding polarity can be impressed on the electric motor. If the voltage in the control circuit should fall below a critical value, the motor is switched-off by way of a relay RS (col. 4, lines 54-64). In Borrmann, a twofold type of control signal is not impressed on the electric motor. Instead the electric motor is merely switched-off if an error is detected in the control circuit. In the present invention, by contrast, both the desired polarity (so that the electric motor will rotate in the desired direction) and the control signal coinciding with that polarity are supplied to the electric motor. Therefore a twofold security is achieved.

Applicant acknowledges the conditional allowance of dependent claims 7-8, but believes that by this amendment and in view of the above remarks, the Examiner's grounds for rejection are not well founded. Accordingly, reconsideration and hopefully allowance of the pending claims is respectfully requested.

Respectfully submitted,


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A method for driving an electric actuator unit with a polarity-dependent actuation direction comprising:

supplying the actuator unit with electrical energy having a polarity that determines the actuation direction and which corresponds to a condition that is fulfilled; and

activating the actuator unit in at least one of the actuation directions only when a further condition, which is independent of the state of the actu A device for driving an electric actuator device or a device actuated by it, is also fulfilled. unit by means of a driving unit, comprising:

the driving unit comprising:

a voltage supply input;

at least one polarity control input;

at least two voltage outputs, the polarity of a signal at the voltage outputs depending on the supplying of the at least one polarity control input with a signal and a control input; and

the actuator unit comprising a drive motor and at least two voltage inputs which are operatively coupled to said at least two voltage outputs, the drive direction of the drive motor being determined by the polarity of the signal at the at least two voltage inputs and the drive motor being operated in at least one of the drive directions only when the control input is supplied with a predefined control signal. ator device or a device actuated by it, is also fulfilled.

A device for driving an electric actuator unit by means of a driving unit, comprising:

the driving unit comprising:

a voltage supply input;

at least one polarity control input;

at least two voltage outputs, the polarity of a signal at the voltage outputs

depending on the supplying of the at least one polarity control input with a signal and a control input; and

the actuator unit comprising a drive motor and at least two voltage inputs which are operatively coupled to said at least two voltage outputs, the drive direction of the drive motor being determined by the polarity of the signal at the at least two voltage inputs and the drive motor being operated in at least one of the drive directions only when the control input is supplied with a predefined control signal